



the RARA RAG

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NO. 10

Joint Comedy RARA & RRRRA Summer Picnic

By Bill Kasperkoski, WB2SXY
President, RARA

Did you hear the one about the new spiritual group called the 'Frisbetarians?' They believe that when they leave this earth, their essence travels in a large gentle arc, lands on the garage roof, and stays there. June 17, 2006, is the day to remember for the start of your new career as a "Stand-up (to the mike) Comedian." Remember to bring your favorite joke book or print some joke sheets off the internet for your 'schtick' of comedy. Or use one from my joke book, if you dare. Just remember that this is a family gathering.

There will be frisbees available for tossing and of course food and soft drinks. Bring a dish to pass such as a salad or dessert. Hots, rolls, condiments, soda and muchies will be provided.

Come to Ellison Park at 12 Noon at Creekside Lodge with your comedy routines and practice on our friendly ham crowd! Talk-in on the '88 repeater and in-park on 146.52 because of the low lying terrain.

RaRa/RRRA Annual Joint Picnic

June 17, 2006

12:00-?

Creekside Lodge at Ellison Park

Food, Beverages and
Fun for all ages.

Talk-In on 146.88Mhz.

RARA presents Book Set to Henrietta Library

By Dick Goslee, KG2I
Past President, RARA

In memory of Raymond Pickens, WA2MYG, RARA, donated an "ARRL Library Book Set" to the Henrietta Public Library on May 9, 2006. The donation is part of our on-going educational program. A similar donation was made to the Webster Library 2 years ago. The book set is made available to amateur radio clubs by the League at a reduced price for presentations such as this.



Mrs. Virginia Cooper is shown accepting the book set on behalf of the Library from Past President Dick Goslee, KG2I along with Jim Stefano, W2COP and Susan Goslee, N2HKA. Mrs. Cooper stated she was very happy to receive this donation as the current selections on the shelves were very limited and some were also out of date.

SILENT KEYS

Ronald E. Johnson, WA2ABL

April 29, 2006

L. Dean Alexander, K2ULB

May 15, 2006

Dale M. Fravel, N2OTC

May 27, 2006

the RARA RAG

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RaRa Rag 2

The Prez Sez

By Bill Kasperkoski, WB2SXY

President, RARA

"We stand on the shoulders of giants and we'll manage." Many thanks to the membership of the organization for allowing me to be Vice-President of RARA for this past year, and giving me the next year to learn to become President for you. We have had many interesting meetings, lots of public service functions and loads of opportunities to put our best foot forward in the public service and public relations arena. Many thanks to the officers, board of directors and members. Thanks to the many people who supported me and gave me opportunities to serve the club as a license class instructor, secretary, and vice-president. I am indebted to those who went before me. Like Newton said "If we see farther, it's because we stand on the Shoulders of Giants." Amateur Radio and RARA is made up of those giants.

The environment that RARA and Amateur Radio live in is changing, and we must be prepared for those changes. Each one of us must increase our skills and abilities; some in the technical and operational fields, some in public service, and some in the organization's leadership. Others must use their strengths to educate non-hams about amateur radio's role in today's society. RARA is only as strong as its membership. Parts of this organization, and other ham organizations, are dedicated to the continuing education of the ham radio community. This continuing education of the membership is an absolute necessity for our survival in the legal, financial, business and public sectors in which we function. RARA is the largest club in the area. RARA has the people, resources, and influence, so if RARA can't get things done, nobody else can. We can not say 'It's not my job' because if it is part of amateur radio, it IS our job. See the Continuing Ham Radio Education article elsewhere in this issue.

Our 'face' to the public requires different types of operations. My personal comfort zone used to be CW; but, it has changed to net functions over the past several years. As I said earlier, our environment is changing and we must increase our capabilities. Increasing our abilities builds our confidence and prepares us to handle the changing environment.

What if 'this' happens or what if 'that' happens? As in any other 'what if' situation the answer is 'We'll manage.'

**September Rag Deadline
August 11, 2006**

What Can We Do as the Ham Radio Environment Changes?

By Bill Kasperkoski, WB2SXY
President, RARA

Everyone's heard that they should stay in school, keep your skills current, practice what you want to be. I'm not going to bore you, but I am going to explain the background.

Ham operators live in an environment that changes daily. Our personal, professional and volunteer lives are constantly bombarded with changes. Change is just a part of the unforgiving universe. Not everything goes the way we want, much of it is not under our control, but everything does go according to some plan. Our job is to understand - to learn, study - that plan, so we can act or respond in a manner that ensures our survival and lets us flourish.

For example, I've discovered that everytime I step off a ladder I fall. I observe. I am trainable. I learn and I can act on and use that knowledge of gravity. When we understand - learn - what is happening in our environment, we can do -act on - one or more of several things. I'm getting ahead of myself, though, I do not want to discuss the outcomes but rather the inputs. There is something new to learn everyday in ham radio, electronics, communications, computers, and operating. Many of today's things did not have names or even exist when I was born, or for that matter, when my kids were born. Learning more about our environment, just like our caveman ancestors did, is the key to our survival and flourishing in our professional, personal and volunteer lives. Learning is the key; we can not get around that. Some of our caveman ancestors learned faster or could apply what they learned better than others, and they are the ones who survived. Those who could not, or just plain chose not, are extinct. If we do not study our environment (social, political, legal, financial or technical) and then respond properly to it, we are doomed.

Ham radio works with organizations such as the Red Cross, ARRL, ARES, Monroe County, RACES, Project Prepare, National Weather Service, local, national, and many others. More of these served organizations are using the Incident Command System / National Incident Management System (ICS/NIMS) and we should become more familiar with this environment and use it in our everyday communications management functions.

For starters hams should check out:
www.training.fema.gov/EMIWeb/IS/crlist.asp and

www.saferesponse.com/sub_page/course_list.htm
for the free online courses offered. These are in addition to those organizations listed on the www.rochesterham.org webpage.

It looks like the only way to beat change is to study it; learn where the opportunities are, and then act on those opportunities. "The best way to predict the future is to invent it." -Dr. Alan Kay.

AWA Museum Open for the Season

By Ed Gable, K2MP/W2AN
Curator, AWA Museum

The A.W.A. *Electronic Communication Museum* is now open for the season. This national treasure, now in it's 53rd year, has one of the best collections in the world valued at well over one million dollars. If it has been awhile since your last visit, or (and hard to believe) if you have never stopped by, do so this year. Admission is free.

It will probably be your only chance to key an operational 1 kW spark transmitter, circa 1912, ... unless you have a really weird hamshack ! New this year are operational broadcast microphones from the mid-1920's. Try your best broadcast voice over a double-button carbon and other fully restored microphones. You will be amazed at the high quality voice reproduction from these 85 year old retired broadcast mics. Open Saturdays and Sundays at 2:00 p.m., the museum is at 8 South Avenue, just off Routes 5&20, in beautiful downtown Bloomfield, NY. Follow the signs. Group tours are also possible. Contact the Museum Curator, Ed Gable K2MP, at (585) 392-3088 or email egable@rochester.rr.com. Also, be sure to visit the museum web site at: www.antiquewireless.org.

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RaRa Rag 20 Years Ago, June 1986

By Ed Gable, K2MP
RARA Historian

The May Annual meeting resulted in the following list of officers for the 86/87 RaRa season: Dick Goslee K2VCZ, President, Bud Young WA2UGE VP, Keith Freeberg N2BEL as Secretary and performing Treasury duties was Dave Bernheisel N2DPF. To the Board of Directors; WB2EFU, N2DWL, K2RJ, N2EH, AF2K, KA2KfV and KA2J. The program for the annual meeting was a hidden transmitter hunt, but no details were published.

The 1986 Rochester Hamfest was history with this issue and General Chairman Harold Smith, K2HC, announced that attendance was estimated at 8,000. Dawn Wierbinski, WB2OWO, was awarded Ham of the Year while the Grand Old Ham Award went to Hugh Turnbull, W3ABC. June 7, 1986, was the date for the annual RaRa picnic at Powder Mills Park. Published was a Summer Rag Calendar that revealed many public service events including pony rallies, sailboat races, Field Days, Driving Competitions, area hamfests... certainly something for everyone. The just completed STPR road Rally, in it's 11th year, saw thirty RaRa members going down to the mountainous area of Pennsylvania for this two day event. The RRRA provided a portable repeater operating on 28/88 and set up on a tall and very convenient fire watch tower. Still a lot of climbing though, as Chet, WB2MDO and Ron, K2RJ will still tell stories about. Jack Struthers, W2OZY, published a story on the history of the Radio Club of Rochester, the predecessor to RaRa pre-1931. From the Want-Ads you could buy a Kenwood TS-520 with 6 and 2 meter transverters from Len WA2ZNC. The only advertiser at this time was Heath/Zenith on Jefferson Road.

Sidebands – Amateur Radio in the News

By Larry Wallnau, W2ZEY
ARRL PIO, WNY

Websites of the month. The new ARRL ham radio promotional site targets the general public. It is part of the "Hello – 100 Years of Voice over Radio" campaign. Go to <http://www.hello-radio.org/>. I will have brochures at Hamfest. Another website is very timely for our recent concerns. There has been much discussion in our club about the New York State law that prohibits scanners in automobiles.

There have been cases of hams having their gear unjustly confiscated by law enforcement officers. The FCC ruling, PR Document 91-36, finds in our favor. Visit the site:

<http://www.arrl.org/announce/regulatory/pr9136/pr91-36.pdf>.

Download the PDF file and keep a printed copy in your car. If you missed the May General Membership meeting, and are curious about the discussion, feel free to give me a call at 389-1926.

ARISS Program. The ARISS school contacts continue a schedule that has now made them seem routine. Recent schools contacted by the International Space Station include Bob Jones High School, Madison, AL, Monday, 2006-05-01, 18:36 UTC; Jaanimarik School, Kuujuaq, Quebec, Canada, Thursday, 2006-05-04, 18:08 UTC; Yoneda-nishi Elementary School, Takasago, Japan, Thursday, 2006-05-11, 09:33 UTC. The total number of ARISS school contacts is 239.

More BPL Complaints. This time the problem is with COMTek, which operates its BPL system in Manassas, VA. Local hams have been complaining of harmful interference and the ARRL has asked the FCC to shut it down until the problems are resolved. In response to the amateurs' complaints, COMTek submitted a report to the FCC claiming the system is in compliance. The ARRL countered with a letter that pointed out the flaws in the COMTek report. As of this writing, the FCC has not yet responded.

Hams respond to severe weather. Last month, Western Tennessee was hit by severe weather that included thunderstorms and 26 tornadoes over a 70 county area. The National Weather Service was busy needless to say. It issued over 130 weather watches and warnings that day. There were 12 fatalities and 160 injured. Jimmy Floyd, NQ4U, the Tennessee Section Emergency Coordinator, explained that a UHF repeater system was used that covers most of the state. Local TV stations monitored ARES on the repeater and the SKYWARN traffic. He noted that amateur radio was a tremendous help in decreasing the response time of emergency personnel. Floyd summed up, "This has been a big test of the ARES system in Tennessee, but rest assured, we will be ready to go when needed."

Marconi exhibit opens. A major Marconi exhibit opened in the UK last month. Guglielmo Marconi's grandson Guglielmo, and his daughter Princess Elettra, attended the opening of a major new Marconi exhibition at the Museum of the History of Science in Oxford, England. The

exhibition, called "Wireless World: Marconi and the Making of Radio", covers the history of radio from Marconi's early demonstrations in the 1880s to the beginning of regular public broadcasts in the 1920s. It will continue until October 1, 2006. Visit <http://www.mhs.ox.ac.uk/> for a PDF file.

Education for science teachers. ARRL Education and Technology Program ("The Big Project", see <http://www.arrl.org/FandES/tbp/>) Coordinator Mark Spencer, WA8SME (left), shone the spotlight on Amateur Radio and the ARRL during the National Science Teachers Association (NSTA) 54th national conference April 6-8 in Anaheim, California. Spencer reports some 15,000 teachers stopped by the ARRL booth, and most picked up a brochure. "I talked with probably 300 educators specifically about ARRL-related programs such as the Teachers Institutes, 'The Big Project' and Amateur Radio on the International Space Station (ARISS)," he said. After he'd demonstrated what happens when you drop a magnet through a length of non-ferrous metal pipe, one teacher returned the next day with his wife "so I could show her the 'magic trick,'" said Spencer. The magic trick demonstrates two fundamentals Spencer uses when teaching electronics and electricity: (1) Moving magnetic fields cause electrons to move, and (2) Moving electrons create magnetic fields. "When the magnet falls through a non-ferrous metal pipe, the moving magnetic field causes the electrons in the conductor to move," Spencer explains. "Those moving electrons in turn create an opposing magnetic field that prevents the magnet from falling right through, giving it a 'slow motion' effect." Spencer says the magnet moves more slowly in a copper pipe than in an aluminum pipe because copper is a better conductor. It falls straight through a PVC pipe because PVC is an insulator. "All of electronics and radio boils down to how we manipulate these two fundamental principles," he concluded.

To Build or Not to Build

By Bill Hopkins, AA2YV

When the Sunspot Cycle is at its saddest level, we know what that means: Rigbuilding Time. After completing my second Sierra Norcal – the all band QRP rig in the ARRL Handbook – I had a few hours before the summer gardening and house repair months to haul out the Elecraft K1 I had been saving back for months. I have a clean little list of about 25 other ham repair, building and rebuilding jobs in the pipeline.

I got the K1 up and running in about 30 hours. Had a little problem on the receiver end at first. (That is before the transmitter section gets built.) I

could align it on 10 and then 7 Mhz just fine. But then when I went to the 17 and after that the 14 Mhz sections, nada. I had experience with this before, as you can expect, when I built my Sierras. In all of my troubleshooting cases, it has either been a solder bridge - seldom but possible - or a bad connection. In most "bad connection" cases it has been poor connections at toroid junctions. No, that's not right. I actually had forgotten to solder the little lead from the antenna connector onto the foil leading to the lowpass filter. Some of us are REAL stupid.

I figured the following with the K1. First, the RF board section, with its lowpass filter and then band pass filter were isolated as the culprit. It had to be somewhere in there. This can be the most difficult and most frustrating section to probe. On receive, you're not dealing with any power to speak of.

I decided to use the poor man's signal injection technique. For this I attached a regular antenna to the input and then used another antenna - a real long outside antenna - to probe various places for a signal to make it through. I finally got a signal after the bandpass filter. And of course, a signal – or should I say signals – appeared immediately. I could copy broadcast band stuff, a logical thing, since I was injecting after the bandpass. I could actually tune the band pass a little bit, but tuning the lowpass on 17 didn't do a thing. Go figure. Being able to get a better signal by tweaking the bandpass trimmer caps threw me off at first. Actually, I was tuning an internal oscillation.

So I looked out the schematic and determined that it could not be the switching relays that are used to switch between filter sections, because the problem was on both 17 and 14, and happily no arrangement of relays would permit my kind of problem. Then I noticed that the only common path for the signal for both bands was through the bandpass toroid. Aha!

I then injected a dirty RF signal with my ancient signal generator. I looked at it on the scope at various places. I did notice some attenuation of the signal after the bandpass, but I think the generator was too close to the receiver for me to get a significant differential in the signal. Lesson learned: a fancy oscilloscope won't always solve your problems.

In the end, it was just simple logic: Scrape the leads of the toroid, primary and secondary of the bandpass and then resolder a bit higher up the wires on the top and the bottom sides of the board. (I decided to try this first before removing the toroid completely and starting over.) Then I went back to try and align the trimmer caps for 17.

(To Build or Not, continued on Page 6)

But I went to 14 first, because there were signals galore to be heard: a contest was raging that weekend. I trimmed them a bit. Then I went back to 17 and tuned around with the trimmers. And BANG, while using the RF signal generator again, the signals came out of the depths. From there on it was a piece-of-cake.

The transmitter section gave me no problem. When aligning the transmitter, one can get a very accurate power out reading, as one retunes all trimmer caps in the bandpass and then the lowpass filters. I also used a fairly accurate QRP wattmeter, all going into an MFJ dummy load to maintain a low SWR. Then I checked the power out with my Icom 440S receiver and found that I indeed had aced the high points of the trimmers.

Thus far I've had good reports Stateside. With 5 watts out, who's gonna give you a QRP report. I made easy 20 meter QSOs with Ecuador and England. It's the antenna, boyz. Yesterday morning I copied a very loud W2 working two very weak JA3's, but QRP probably won't cut it at this part of the sunspot cycle. That's why it's time to build, rebuild and repair. Keep the wave going, as they say.

ARLB008 FCC WRC-03 amateur rule changes now in effect

Several FCC Part 97 Amateur Radio rule revisions to implement changes agreed to at the international level during World Radiocommunication Conference 2003 (WRC-03) now are in effect. The FCC Order, released in January, affects 97.111, Authorized transmissions; 97.113, Prohibited transmissions; 97.115, Third party communications, and 97.117, International communications. The Federal Register published the changes May 3.

"These amendments will ensure that the Commission's Amateur Radio Service rules conform to Article 25 of the international Radio Regulations adopted at the 2003 World Radiocommunication Conference, and will further the Commission's ongoing efforts to streamline its Amateur Service Rules," the FCC Order said. "The overall effect of this action is to update the Part 97 Amateur Radio Service rules in the Code of Federal Regulations to conform to now-effective international agreements." The FCC Order revises:

* 97.111(a)(1) to permit "transmissions necessary to exchange messages with other stations in the Amateur Service, except those in any country whose administration has notified the ITU that it

objects to such communications. The FCC will issue public notices of current arrangements for international communications." The old language permitted communication among amateur stations in different countries "except those in any country whose administration has given notice that it objects to such communications." The FCC said the change does not prejudice its proposal to amend 97.111(a)(2) to clarify that amateur stations may, at all times and on all authorized channels, transmit communications necessary to meet essential needs and to facilitate relief actions.

* 97.115(a)(2) to facilitate the transmission of international communications on behalf of third parties in emergency or disaster-relief situations, whether or not a third-party agreement is in place between the US and the countries involved. The revision now permits communication with any non-US station "when transmitting emergency or disaster relief communications" as well as with any non-US station "whose administration has made arrangements with the United States to allow amateur stations to be used for transmitting international communications on behalf of third parties." The revised rule further provides that no station may transmit third-party traffic other than emergency or disaster relief communications to a station in a country lacking a third-party arrangement. Still excepted from the prohibition is any third party eligible to be the control operator of an amateur station.

* 97.113(a)(4) to prohibit amateur stations exchanging messages with amateur stations in other countries from making transmissions that are encoded for the purpose of obscuring their meaning, except for control signals exchanged between Earth command stations and space stations in the Amateur-Satellite service, something Part 97 already provides for. The old rule referred to the use of "codes and ciphers." The same rule also already prohibits transmitting music, communications intended to facilitate a criminal act, obscene or indecent words or language and false or deceptive messages, signals or identification.

* 97.117 to state that amateur stations may transmit communications incidental to the purposes of the Amateur Service and to remarks of a personal character. The FCC also revised 97.3 and 97.309 to update the definition of International Morse code and of various digital codes in the amateur rules to reflect changes in the international Radio Regulations.

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